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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/686,682	10/11/2000	Atsushi Onoe	45100-02783	5819

20999 7590 02/17/2004

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EXAMINER

PHAN, MAN U

ART UNIT	PAPER NUMBER
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2665

DATE MAILED: 02/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/686,682

Applicant(s)

Onoe et al.

Examiner

Man Phan

Art Unit

2665

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on Oct 11, 2000
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7, 9-17, and 20 is/are rejected.
- 7) ☒ Claim(s) 8, 18, and 19 is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on Oct 11, 2000 is/are a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some\* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_ 6) ☐ Other:

### **DETAILED ACTION**

1. The application of Onoe et al. for the "Transmitter, communication system, and communication method" filed 10/11/2000 has been examined. This application claims foreign priority based on the application 11-289504 dated 12/10/1999 filed in Japan. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file. Claims 1-20 are pending in the application.

#### ***Drawings***

2. Figures 1-9 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

#### ***Specification***

3. The disclosure is objected to because of the following informalities:

The status of the related application USSN# noted on page 1 need to be updated. S/N 09/609,177 is now US Patent # 6,654,370, and S/N 09/609,497 is now US Patent # 6,473,433. Appropriate correction is required.

4. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 250 words. It is important that the abstract not exceed 250 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The Abstract of the disclosure is objected to because it should not contain more than 25 lines or 250 words. Correction is required.

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 3 and 11 recite limitations "the IP address" in line 4, and "the port number" in lines 5-6. There is insufficient antecedent basis for these limitations in the claims.

7. Claim 12 recites limitations "the IP address" in line 8, and "the port number" in lines 10-11. There is insufficient antecedent basis for these limitations in the claim.

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103© and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

10. Claims 1-3, 6-7 and 9-12, 15-17 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taniguchi (US#6,222,841) in view of Ohba et. (US#6,501,760).

With respect to claims 1, 6-7 and 9, 15-17, both Taniguchi (US#6,222,841) and Ohba et al. (US#6,501,760) disclose a novel method and system for the transfer of packet data utilizing priority control and admission control, according to the essential features of the claims. Taniguchi provides a data transmission system for transmitting an encoded stream via a network, has a video transmission unit having a stream coding unit for generating an encoded stream which is packetized in units of abandonable data, and in which a header including a packet identifier also serving as packet priority is added to each packet, and a stream shaping processing unit for determining transmission or abandonment of each packet in the encoded stream generated by the stream coding unit using the packet identifier included in the header of each packet in accordance with the designated bit rate. With this arrangement, even when the available network bandwidth changes during transmission of an encoded stream, it is checked at cycles discriminated based on the control packets if the current bit rate corresponds to the available network bandwidth, and control is made to sequentially and preferentially transmit packets in the order from those with higher priority levels based on the packet priority levels within the allowable range, thus dynamically coping with changes in network bandwidth (Col. 2, lines 53 plus). Taniguchi further teaches in Fig. 1 a block diagram illustrated the outline of a data packet transmission in which the stream structure prescribes packetizing of a stream in units of encoded data, cyclical insertion of control packets indicating coding cycles into a stream, and a packet header format (*packet identifier also serving as a packet priority level*). The stream shaping processing unit 02 performs stream shaping

processing (*bit rate control method*) for an encoded stream, which is input from an input unit 00 and stored in the external storage unit 08, by packet filtering using packet identifiers, which also serve as *packet priority levels and are added to the headers of the individual packets*. Thereafter, the unit 02 transmits a stream onto the network via a transmission unit 04. Upon executing the stream shaping processing, the stream shaping processing unit 02 determines in accordance with the *priority assigned to each packet identifier registered* in a table 03 if each packet is to be abandoned or transmitted. To allow bit rate control by numerical value designation, the stream shaping processing unit 02 preferentially transmits packets in the order from those having higher priority levels within the range of the available network bandwidth on the basis of the correspondence between the packet identifiers and priority levels registered in the table 03, and increases the number of packets to be transmitted within the allowable range. As for packets having identical priority within a single cycle, it is determined that the leading one of these packets has higher priority (Col. 7, lines 16 plus).

In the same field of endeavor, Ohba et al. (US#6,501,760) teaches a node device for transferring packets by attaching priority information (*packet identifier*), a node device for processing packets attached with priority information, and a packet transfer method using priority information attached to packets. Ohba discloses a mechanism for a packet transfer scheme in which a marking information by writing the priority information according to criteria of the own node into a region in a packet (*adding packet ID corresponded to the predetermined bandwidth*) into which the own node is allowed to write the priority information among the plurality of regions to which the priority

information can be written, and transmitting that packet to a next hop node while maintaining the priority information in the other regions as received (Col. 3, lines 7 plus).

Regarding claim 20, this is a method claims corresponding to the apparatus claims above. Therefore, claim 20 is analyzed and rejected as previously discussed with respect to claims 1 and 9.

One skilled in the art would have recognized the need for effectively and efficiently performing packet communication in a packet network with guaranteed bandwidth, and would have applied Ohba's teaching of a mechanism for a packet transfer scheme into Taniguchi's novel use of stream shaping processing unit utilizing header including packet identifier. Therefore, It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to apply Ohba's node device and packet transfer method using priority information in plural hierarchical levels into Taniguchi's data transmission system and method with the motivation being to provide a method and system for performing packet communication in a packet network.

11. Claims 4-5 and 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taniguchi (US#6,222,841) in view of Ohba et al. (US#6,501,760) as applied to the claims above, and further in view of carter et al. (US#6,538,989).

With respect to claims 4-5 and 13-14, Taniguchi and Ohba et al. disclose the claimed limitations as discussed in paragraph 10 above. Taniguchi and Ohba et al. do not disclose the use of token bucket shaper in the packet transmission. In the same field of endeavor, Carter et al. (US#6,538,989) discloses a traffic shaping in packet network



using token bucket traffic descriptors in the connection admission control (CAC) algorithm and scheduling schemes like Weighted Fair Queuing (WFQ). When the shaping process used ensures that the instantaneous peak rate never exceeds the specified peak-rate, this is referred to as strict peak rate shaping (See Figs. 6(a) and 6(b) which show a qualitative comparison between flows produced by token bucket and peak-rate shaping for a particular instantaneous fill of the bounded delay buffer). Thus, the implement strict peak-rate shaping using a token bucket shaper provided an appropriate bucket size is used in conjunction with a different scheduling rule than presently used. For example, if there is a specified maximum allowed packet size for the bounded delay class, then peak-rate shaping would be achieved using a bucket size equal to the maximum allowed packet size in conjunction with the rule that no packets can be sent until the token bucket is full. Once the bucket is full, then the buffer is played out until either the token bucket is emptied or the buffer is emptied. No more packets are then sent until the token bucket is completely full again, and so on (Col. 17, lines 50 plus and Col. 19, lines 41 plus).

One skilled in the art would have recognized the need for effectively and efficiently performing packet communication in a packet network with guaranteed bandwidth, and would have applied Carter's shaping process with token bucket traffic descriptors in the CAC algorithm, and Ohba's teaching of a mechanism for a packet transfer scheme into Taniguchi's novel use of stream shaping processing unit utilizing header including packet identifier. Therefore, It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to apply Carter's packet

network and Ohba's node device and packet transfer method using priority information in plural hierarchical levels into Taniguchi's data transmission system and method with the motivation being to provide a method and system for performing packet communication in a packet network

*Allowable Subject Matter*

12. Claims 8 and 18-19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

13. The following is an examiner's statement of reasons for the indication of allowable subject matter: The prior art of record fails to disclose or suggest wherein further provision is made of a registering means for registering identifiers corresponding to packet data to be transferred without exceeding the set guaranteed bandwidth and guaranteed bandwidth thereof, as specifically recited in claims 8 and 18.

*Conclusion*

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The Ise et al. (US#6,643,258) is cited to show the communication resource management method and node device using priority control and admission control.

The Katsube et al. (US#5,930,259) is cited to show the packet transmission node device realizing packet transfer scheme and control information transfer scheme using multiple virtual connections.

The Nagami et al. (US#6,167,051) is cited to show the network node and method of packet transfer.

The Chin (US#5,872,783) is cited to show the arrangement for rendering forwarding decisions for packets transferred among network switches.

The Katsube et al. (US#6,185,213) is cited to show the packet transfer control method and node device using plurality of dedicated cut-through paths.

The Horlin (US#6,212,162) is cited to show the arrangement and method relating to packet flow control.

The Bonaventure (US#6,680,907) is cited to show the shaping method, a shaper realizing such a shaping method and communication network including such a shaper.

The Shimojo (US#6,490,248) is cited to show the packet transfer device and packet transfer method adaptive to a large number of input ports.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to M. Phan whose telephone number is (703)305-1029. The examiner can normally be reached on Mon - Fri from 6:30 to 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu, can be reached on (703) 308-6602. The fax phone number for the organization where this application or proceeding is assigned is (703)305-3988.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

16. **Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

**or faxed to:** (703) 305-9051, (for formal communications intended for entry)

**Or:** (703) 305-3988 (for informal or draft communications, please label

"PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2021

Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

Mphan

02/12/2004

*Man a phan*  
**MAN PHAN**  
**PATENT EXAMINER**